A survey of radiation dose and image optimisation for cardiac interventional proocedures .

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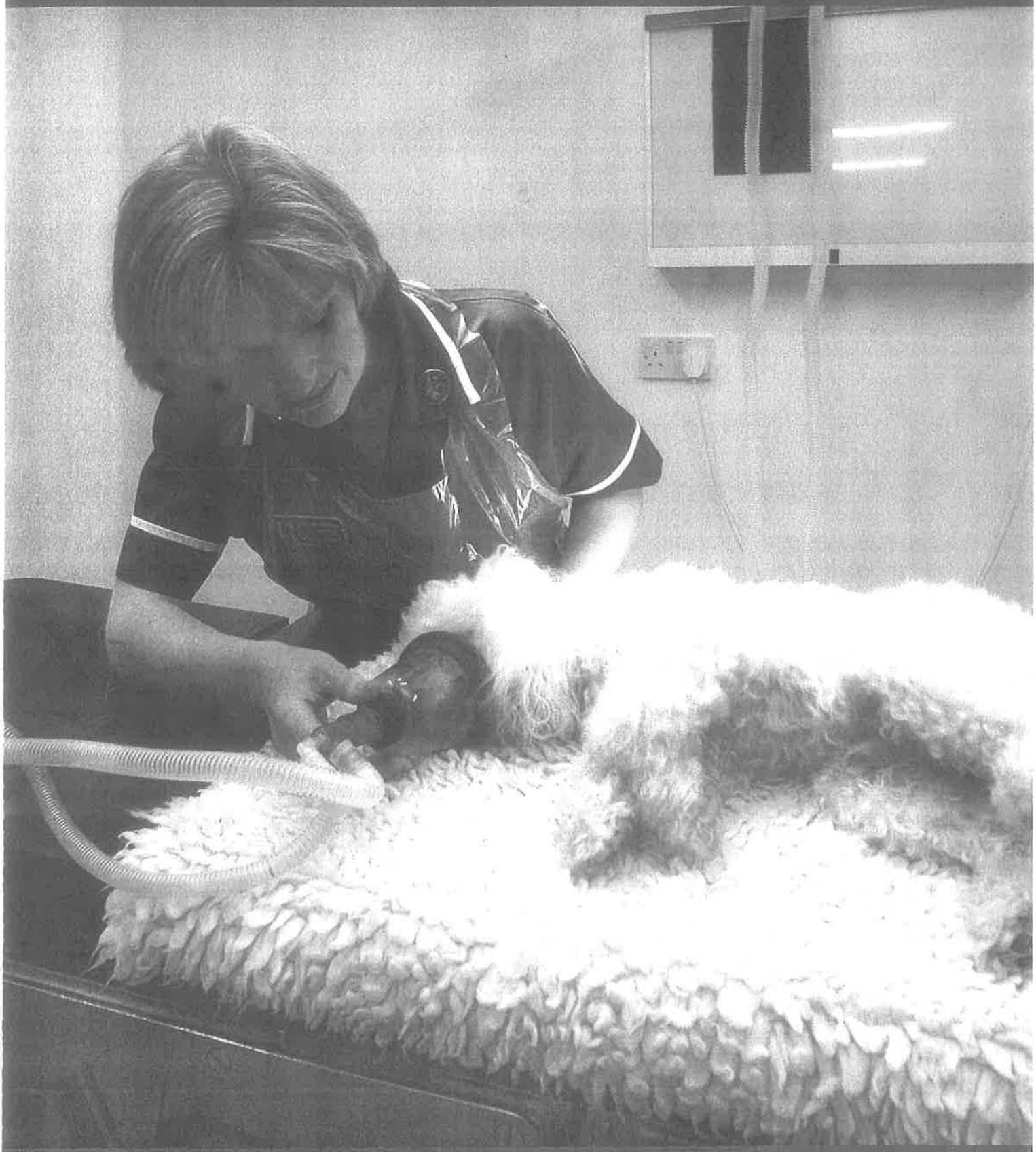

reports

thrice daily milking (n=4) for a period of 28 days. Both groups were fed grass silage ad-lib and 8kg concentrates/head/day. Parameters measured included neutrophil cell counts, plasma cortisol concentration and mRNA expression of anti-apoptotic markers. Neutrophils from cows milked once daily expressed greater relative quantities of the anti-apoptotic markers NFκB p65 subunit, IκBα, HSP70 and XIAP mRNA than cows milked three times daily at day 3 postpartum ($P<0.05$) but not at days 14 ($P>0.05$) or 28 ($P>0.05$). These results suggest that the increase in neutrophil numbers in cows milked once daily is due to the induction of an anti-apoptotic phenotype that has disappeared by day 14 postpartum.

Preliminary results from a survey on parasite control practices on lowland sheep farms in Ireland

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Gastrointestinal parasites are an important cause of production loss in ruminants. While current annual expenditure on anthelmintics in Ireland is approximately 24 million (APHA), little is known about specific parasite control practices on farms. The present survey was conducted as part of a study on anthelmintic resistance, to determine parasite control practices from a representative sample of lowland sheep producers.

A questionnaire relating to farm details, grazing and worm treatment practices was mailed to two groups of lowland sheep farmers. The first group (n=128) were selected by Teagasc advisors based on the criterion that ewe number was equal to or greater than 100. The second group (n=38) were lowland producers already involved in a Teagasc study (Technology Evaluation Transfer).

Questionnaires were returned by 87 (68%) non-TET and 28 (73%) TET farmers. The majority of respondents (98% non-TET, 96% TET) stated that they treated their sheep with anthelmintics. Lambs were the cohort treated most frequently, with 94% (74/83) and 81% (21/26) of farmers following a set programme and 8% (7/83) and 27% (7/26) treating at a sign of disease for the non-TET and TET farms, respectively. The modal number of treatments given to lambs was three (35%) for non-TET compared with four or five for the TET farms (27% for each).

Parasites other that GI nematodes were acknowledged as a problem on 51 and 15 of the non-TET and TET farms, respectively. The most frequently cited parasites were liver fluke and maggots, 75%, 58%, respectively, for the non-TET farms and 53%, 86%, respectively, for the TET farms. In response to the question 'do you believe worm treatments work as well for you as they did in previous years?' 47% (40/85) non-TET and 30% (8/27) TET farms replied 'no'.

A survey of radiation dose and image optimisation for cardiac interventional procedures

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Interventional radiological procedures are increasingly common because of their cost-effectiveness compared with surgical procedures. Prolonged fluoroscopic exposures, particularly those associated with cardiovascular studies are responsible for some of the highest patient and staff radiation doses. Such exposures increase the risk of stochastic effects and regularly cross the threshold dose above which, deterministic effects such as erythema, epilation and ulceration are experienced. Radiation levels using dose area product and fluoroscopy time are currently being determined and compared for coronary angiograms (CA), percutaneous coronary intervention (PCI) and permanent pacemaker insertion procedures (PPI) across 15 hospitals. Other factors such as operator grade, technique and equipment used are also recorded, and their potential effect on patient dose investigated.

To date, the results demonstrate a mean dose for CA procedures of 74.26Gycm^2, for PCI procedures 107.44Gycm^2, for PPI procedures 37.05Gycm^2. However, large intra-hospital and inter-hospital variations were noted. The screening time varied by a procedure-specific extent, and showed a strong relationship with radiation dose delivered. Other causal agents will be discussed. Due to the risks associated with X-ray exposure, radiation doses should be kept as low as reasonably achievable, consistent with good image quality. However, significant variations in radiation dose and image quality for coronary interventional procedures have been shown within and between hospitals in Ireland for the first time. Possible areas of standardisation and potential Diagnostic Reference Levels will be proposed.